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EVE (P.F.)

A CONTRIBUTION

TO THE HISTORY OF THE

HIP-JOINT OPERATIONS PERFORMED DURING THE LATE CIVIL WAR:

BEING THE

STATISTICS OF TWENTY CASES OF AMPUTATIONS AND THIRTEEN
OF RESECTIONS AT THIS ARTICULATION IN THE
SOUTHERN SERVICE.

BY

PAUL F. EVE, M. D.,

PROFESSOR OF SURGERY IN THE UNIVERSITY OF NASHVILLE, TENN.



EXTRACTED FROM THE

TRANSACTIONS OF THE AMERICAN MEDICAL ASSOCIATION.

PHILADELPHIA:

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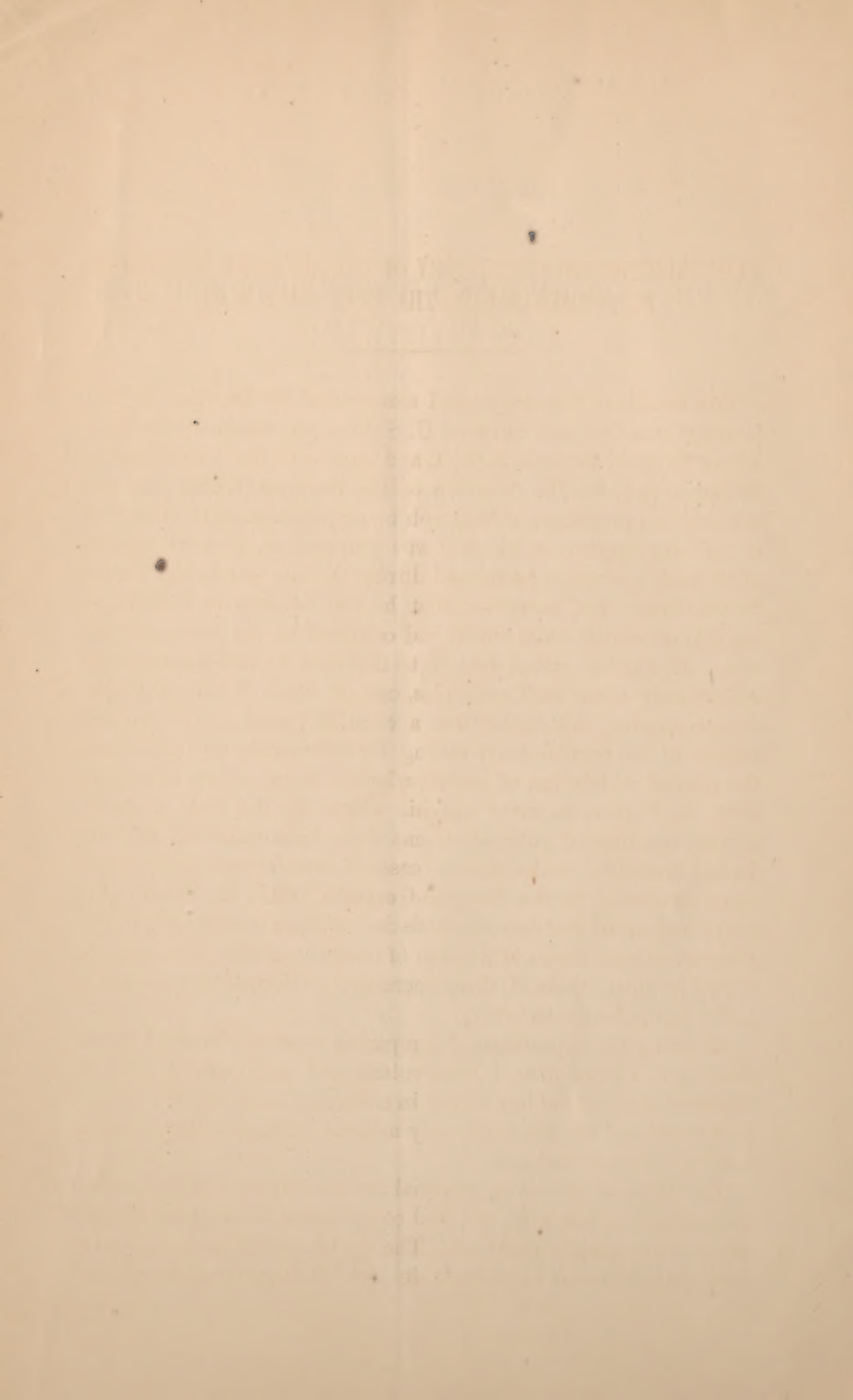
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A CONTRIBUTION TO THE HISTORY OF THE HIP-JOINT OPERATIONS PERFORMED DURING THE LATE CIVIL WAR.

THE middle of February last I was notified by Dr. Geo. A. Otis, Brevet Lieut.-Col. and Surgeon U. S. Vols., in charge of the Division of Surgical Records, S. G. O., and Curator of the Army Medical Museum, that, by the direction of the Surgeon-General, he was engaged in preparing a monograph on amputations at the hip-joint in military surgery, in which it was proposed to give full reports of all such operations performed during the late war in the United States Army; and, moreover, that he was anxious to include an account of similar cases which had occurred in the Southern Service. He further stated, that up to that date he had been able to collect only three such examples, one of which I had sent him. Accompanying this notice was a circular issued to the medical officers of the regular army asking for information on the subject, the plan of which was, of course, adopted in my efforts to comply with the request to carry out his wishes by the 15th of April, though the time of publication has since been extended to June. In less than eight weeks, thirteen cases of coxo-femoral amputations were forwarded to the Surgeon-General's Office, in Washington City; and up to this date my statistics embrace twenty such examples, with the addition of thirteen of resection at this joint, making a total of thirty-three of these operations performed at this articulation in the Southern army.

Knowing the importance of comparing these two kindred operations at this large joint, I have volunteered to do what I could in the brief space of the last month in collecting them, and the shorter period allowed for the work may account for their number being less than the amputations.

The labor of obtaining material for this report has been much diminished by the kind aid and co-operation of the profession to whom I am greatly indebted. The particulars of each case have been derived, as far as practicable, from the operator himself, and

his own language preserved. Aiming to present the whole truth, every available means were employed, and, in several instances, the full history has been secured. To many professional gentlemen I have been placed under peculiar obligations, some of them personally unknown to me, and to all named is due this public acknowledgment; but to Dr. Charles H. Mastin, of Mobile, in particular, I cannot withhold my sincere thanks for much of the reliable information in this paper.

To the 1st of February, 1864, there had been reported to the office of the Surgeon-General, S. P. Moore, of the late Confederate Army, three cases of primary amputations at the hip-joint, with one recovery, and two of resections, both secondary, one died and one recovered. The two successful cases were, probably, Dr. Gilmore's amputation and Dr. Read's resection, detailed hereafter.

My statistics embrace the report of thirty-three such cases collected during the months of March and April of this year.

Table I. contains the cases of amputations and Table II. those of resections at the coxo-femoral articulation, performed during the late civil war in the Southern service. And to enhance the value of this collection will be appended all the facts obtained in regard to each one, thus making their history as near complete as it was possible under the circumstances.

TABLE I.—*Amputations at the Hip-Joint.*

No.	Name of operator.	Name and rank of patient.	Nature and date of injury.	Date of operation.	Result.	Authority.	Remarks.
1	J. R. Buist, M. D., Brigade Surgeon, Maury's Brigade, Cheatham's Div., C. S. A.	Private.	August 30, 1864; cannon- ball lacerating upper outer third of thigh, and comminuting femur through trochanters and neck.	Three hours after being shot.	Death 13 hours after operation.	Dr. Buist, now in Nashville, Tenn.	Cold water dressings and stimulants were used. Patient remained sensible for 6 or 8 hours after being removed from table. (See full history of Case No. 1, at foot of these tables.)
2	D. W. Vandell, M. D., Med. Director, Gen. A. S. John- ston's Staff, C. S. A.	Private.	Crushing of left thigh by a shell at Shiloh, April 7, 1862.	April 7, 1862.	Death in 7 hours.	Dr. Vandell, now in Louisville, Ky.	The femur was shattered into the joint, and the soft parts torn to shreds into the upper part of thigh. Patient wounded in morning, and reaction was deemed suf- ficient by evening for the amputation.
3	Surgeon St George Peachy, assisted by Surgeon Chas. Bell Gibson, C. S. A.	Private in U. S. army.	....	After first battle of Manassas, Ju- ly 21, 1861.	Death suddenly in a few days after operation.	Prof. T. G. Rich- ardson, M. D., of N. Orleans; also Surg. E. T. Sabal, M. D., of Jack- sonville, Fla.	"The patient was an inmate of the Alms- house Hospital." Both Surgeons Peachy and Gibson died during the war, in Rich- mond, Va.
4	Dr. Felton, Surgeon to Col. Dockery's Arkansas Reim't, Cabell's Brigade, Maury's Division, C. S. A.	Private.	Gunshot fracture of thigh.	At Inka, a month after he had been wounded in the attack on Co- rinth by Gen. Price and Van Dorn, Oct. 1862.	Death on the ta- ble within an hour.	S. L. Nidelet, M. D., late Chief Surgeon of Gen. Maury's Divis.; now in Mobile, Ala.	Dr. Felton died of fever in Mississippi, 1863.
5	W. A. East, M. D., of San Antonio, Texas.	A negro man, a refugee with his master from Ark sas.	Latter part of 1864; head of os femoris crushed by a rifle-ball.	Ten hours after he was shot.	Rapid recovery.	Dr. East, in the Aug. No., 1866, of the <i>Southern Journal of Med. Sciences</i> , N. Or- leans, La.	Larrey's method was adopted; the arteries were tied as divided. Fifteen or twenty days after the operation, the patient suf- fered intensely in the stump, and thence up the spinal column. A tumor was de- tected over the last lumbar vertebra, which suppurated freely, was opened, and a ball flattened about one-half extracted. The patient complained no more after the ab- scess healed, and has fully recovered. <i>Vide</i> journal referred to in which this case is published.
6	Benjamin D. Lay, M. D., now of Cin- cinnati, Ohio.	....	Shell wound of thigh.	....	Death on table in about an hour and a half.	S. L. Nidelet, M. D., late Ch. Sur- geon, Gen. Man- ry's Div., now of Mobile, Ala.	Have written to Dr. Lay several times. Ascertained recently that he now resides in Cincinnati, Ohio.

TABLE I.—Amputations at the Hip-Joint—Continued.

No.	Name of operator.	Name and rank of patient.	Nature and date of injury.	Date of operation.	Result.	Authority.	Remarks.
7	J. T. Gilmore, M. D., Surg. C. S. A., now of Mobile, Ala.	Private (Williamson, he thinks), 13th Miss. Reg't.	A few days after battle of Seven Fines, while on picket; femur badly shattered.	Within 3 hours, after receipt of wound.	Fully recovered; farloughed and returned home.	Dr. Gilmore.	At the battle of Cedar Creek, Oct. 19, 1864. Dr. G. lost his record of cases. In this patient he thinks the recovery was due to extra care and being near to Richmond, where excellent supplies could then be obtained. (See further particulars of this case and the two next, following these tables.)
8	J. T. Gilmore, M. D., Surg. C. S. A., now of Mobile, Ala.	Member of Gen. Barksdale's Miss. Brigade.	At Malvern Hill.	....	Death in a few hours after operation.	Dr. Gilmore.	Dr. Gilmore had all his papers captured in Oct. 1864, containing notes of these cases. He served nearly the entire war in the field, and his ample experience teaches him that primary amputation at the hip-joint is not a good operation. Neither does he favor resection at this articulation. He prefers leaving the patients, requiring, as is generally supposed, one or the other of these operations, to the efforts of nature.
9	J. T. Gilmore, M. D., Surg. C. S. A., now of Mobile, Ala.	Member of Gen. Barksdale's Miss. Brigade.	At Malvern Hill.	....	Death in about 48 hours.	Dr. Gilmore.	Patient was shot accidentally by a comrade. Lisfranc's operation was performed. We can learn nothing further of this patient. (See Dr. G.'s own account of this and his case of resection, appended to these tables.)
10	J. F. Grant, M. D., Surg. P. A. C. S., now of Pulaski, Tenn.	Private in Maj. Douglass' Baltimore Cavalry.	Shot-gun charged with buck and ball cartridge, received at four inches; extensive comminution of femur; near Lavergne, Tenn., fall of 1862.	Eight hours after being shot.	Fell into enemy's hands; was doing well 11 days after operation; result doubtful.	Dr. Grant.	
11	A. M. Fauntleroy, M. D., Stanton, Va., Surg. C. S. A.	Private, Co. E, 43d N. Carolina Infantry.	Admitted into hospital Dec. 1864, with amputated thigh for gunshot wound received at Cedar Creek; performed Oct. 1864.	March 11, 1865; the bone, being diseased, was removed from the acetabulum by incisions.	Stump entirely healed by 24th April; fully recovered.	Dr. Fauntleroy, in <i>Richmond Medical Journal</i> , Jan. No., 1866.	
12	Prof. Edward Warren, M. D., Surgeon C. S. A., now of Baltimore, Md.	Private J. H. Wolf, Co. D, 4th Va. Reg't.	July 21, 1861, at Manassas; ball striking three or four inches below trochanters, resulting in comminution to neck.	August 22, 1861.	Death in 30 hours.	Prof. J. S. Davis, M. D., of the Univ. of Virginia, at Charlottesville.	Case was very unfavorable. Patient had colliquative diarrhoea.
13	W. M. Compton, M. D., Surg. C. S. A., 2d Tex. Reg., now of Holly Springs, Miss.	Private Roberts or Robison, set about 35.	March, 1863, at Fort Pemberton, Mississippi; shell wound just below left hip-joint.	Immediate.	Successful, recovering in a short time without an unpleasant symptom.	Dr. Compton.	A year afterwards, his surgeon in charge reported the patient in fine health and spirits. (See full account of this case by Dr. C., and Nos. 14 and 15, following the tables.)

No.	Name of operator.	Name and rank of patient.	Nature and date of injury.	Date of operation.	Result.	Authority.	Remarks.
14	W. M. Compton, M. D., Surg. C. S. A., 2d Tox. Reg., now of Holly Springs, Miss.	Lieutenant, et. about 28 or 30; an Arkansas regiment, Campbell's Brigade.	At Corinth, Oct. 3, 1862; solid shot tearing away soft parts and shivering femur into acetabulum.	On the field; right hip.	Did well for 7 or 8 days, when erysipelas seized the wound, and he died in 36 hrs.	Dr. Compton.	The notes of these cases were lost before the close of the war.
15	W. M. Compton, M. D., Surg. C. S. A., 2d Tox. Reg., now of Holly Springs, Miss.	Private Cooper, et. about 20; an Alabama regiment.	At Vicksburg; terrible shell wound of right hip, comminuting upper third of femur, &c.	....	Death; no reaction took place; this was a desperate case.	Dr. Compton.	See account of these cases from letter of Dr. C., Nos.
16	Surg. Rich'd Potts, M. D., late P. A. C. S., formerly of U. S. Army.	A young man named Jackson, et. about 21 years.	At Belmont; gunshot wound fracturing femur badly.	Operation by antero - posterior flaps, some time after injury, at least 6 or 8 days.	Death 10 hours after operation.	Prof. D. D. Saunderson, M. D., of Memphis, Tenn.	Dr. Potts, lately deceased. From four different sources I have received the opinion that this was an untimely operation. (See what Dr. S. says in reference to it, in letter following the tables.)
17	R. A. Kinlock, M. D., Surg. P. A. C. S., now in Charleston, S. C.	Private, 56th Mass. Colored Regiment.	Wounded at Battery Wagner, Charleston; shell striking head of femur and brim of acetabulum.	July 13, 1863.	Died in about 20 hours.	Dr. Kinlock.	Mancee's operation was performed in this case.
18	R. P. Bateman, M. D., Surg. C. S. A., now of Memphis, Tenn.	John Chamberlain, private in U. S. Army.	Minie ball through neck of femur, comminuting bone extensively.	September, 1863, 24 hours after injury.	Death in 36 hours.	Dr. Bateman.	These men were left on the field of Chickamauga.
19	R. P. Bateman, M. D., Surg. C. S. A., now of Memphis, Tenn.	James Carden, private in U. S. Army.	Shell wound, producing extensive laceration with comminution of femur.	September, 1863, 24 hours after injury.	Death on the 6th day.	Dr. Bateman.	
20	A. C. Crymes, M. D., late Assist. Surg. 39th Ala. Infantry, now of Eufaula, Ala.	....	....	....	Death.	Dr. C. Toxey, late Surg. 19th Ala. Inf'y; through Dr. C. H. Mastin, of Mobile, Ala.	

TABLE II.—Resections at the Hip-Joint.

No.	Name of operator.	Name and rank of patient.	Nature and date of injury.	Date of operation.	Result.	Authority.	Remarks.
1	Prof. Jas. B. Read, M. D., then Surg. C. S. A., now of Savannah, Ga.	J. M. Jarrett, Lieut., Co. C, 16th N. Carolina Infantry, at 23.	At Bristow, October 14, 1863; struck by Minie ball two inches below Poupart's ligament, fracturing and comminuting the left femur.	Entered Hospital No. 4, Richmond, Va., October 20; operation performed under chloroform, Nov. 9.	Successful; Dec. 9, the limb is shortened 5 inches, and the wound nearly healed; patient cheerful; can move himself with ease and facility in bed.	Dr. Read, in the Jan. No. 1, 1864, <i>Confed. States Med. and Surgical Journal</i> .	
2	Prof. Jas. B. Read, M. D., then Surg. C. S. A., now of Savannah, Ga.	Alfred Toney, private, 16th North Carolina Infantry.	Wounded 30th June, 1863, in left buttock; ball lodged; thought to be doing well.	Aug. 11, under chloroform; the finger entered acetabulum; found round ligament severed, head of femur fractured, and ball in the joint; cotyloid cavity broken across.	Died eighth day, from hectic fever; had much improved in 24 hours after operation.	Dr. Read, in the Jan. No. 1, 1864, <i>Confed. States Med. and Surgical Journal</i> .	
3	Prof. Millenburger performed a second resection upon shaft of bone.	W. F. Humphreys, Co. H, 1st Va. Reg't.	Wounded four times at South Mountain, one ball fracturing neck of femur.	At Frederick, Md., five weeks after being wounded.	Successful; after nine months this patient recovered, with a shortening less than an inch.	Editor <i>Confed. States Medical and Surgical Journal</i> , 1864.	If only an inch shortening of the limb, the recovery with so little deformity is quite remarkable.
4	Surg. Ladd, M. D., of Ransom's Brigade and Ca.	Private in a N. Carolina regiment.	Summer of 1864, during bombardment of Petersburg; gunshot wound, and comminution of head of femur.	Performed a few hours after the patient was brought from field.	Considered successful, for patient lived over 60 days, and then died for want of proper nourishment.	Dr. J. D. Jackson, then in the service, who witnessed the operation; he is now of Danville, Ky.	See letter from Dr. Chas. J. O'Hagan.
5	Surg. J. F. Grant, M. D., C. S. A., now of Pulaski, Tenn.	T. J. Hobson, private, Co. H, 32d Tenn. Regiment, at 23.	Battle Kennesaw Mountain, June 24, 1864; compound comminuted fracture of femur, extending into the joint.	Operation 12 hours after receipt of injury, under chloroform.	Died 3 days after operation, having never fully reacted.	Dr. Grant.	
6	Surg. B. W. Arent, M. D., Medical Director in C. S. A.	An officer.	Gunshot fracture of neck of femur; two fingers at entrance and exit fully explored the wound.	Wound dilated at entrance, and spicule removed with saw and forceps.	Lingered for months, but finally recovered with a limb 4 inches short, but able to walk with assistance of a cane.	Dr. Arent.	

No.	Name of operator.	Name and rank of patient.	Nature and date of injury.	Date of operation.	Result.	Authority.	Remarks.
7	Surg. Cullen, M.D., of General Long- street's Staff.	Private in a Michigan re- giment.	Wounded and captured in front of Knoxville, Tenn.	Knoxville, Tenn., when invested by the Con- federates.	Was recaptured 6 days after the operation; it probably died, as the case was unpromising.	Dr. J. T. Gil- more.	{ Notes captured in the valley of Virginia.
8	J. T. Gilmore, M.D.	....	....	....	Death.	Dr. J. T. Gil- more.	
9	J. T. Gilmore, M.D.	....	....	....	Death.	Dr. J. T. Gil- more.	
10	Dr. M. J. Ash, U. S. Army, of Philadel- phia, Pa.	....	At Gettysburg; head, neck, and trachea of femur comminuted by a grape-shot.	28 days after receipt of wound; about 14 inches were sawed off with head.	Successful.	Dr. D. Saunders, M.D., late Sur- geon U. S. A., now of Mem- phis, Tenn.	{ Patient was a healthy man, et. 25. Eighteen months after operation, could walk with a stick. Limb shortened three inches. Had some motion at the joint.
11	None mentioned.	....	....	Primary.	Death 28 days after op- eration.	Dr. D. Saunders, M.D., etc.	
12	None mentioned.	....	....	Primary.	Death 25 days after op- eration.	Dr. D. Saunders, M.D., etc.	
13	J. Dickson Bruns, Surg. U. S. A., now Professor in New Orleans School of Medicine.	Private.	Grape-shot wound of hip- joint; Minie ball.	Resection through site of injury.	Death from excessive suppuration.	Dr. Bruns.	{ These three cases are reported in the April No., 1866, <i>Memphis Med. and Surg. Monthly</i> . The fatal cases resulted from exhausting suppuration. This is all the account I have re- ceived of this case from the op- erator.

History of Case No. 1. Surgeon Buist.—A. B., a private in 27th Tennessee Regiment, Maney's Brigade, Cheatham's Division, received a wound from a solid shot at battle of Jonesboro', Georgia, August 30, 1864. Two hours after receipt of wound was brought to field hospital in the following condition: The shot had struck the upper third of right thigh, carrying away a large portion of soft tissue on the outer and posterior section of the limb, reaching nearly to the lower border of the gluteal region and exposing the femur, which was terribly comminuted and apparently fissured through trochanters and neck at least. The general condition of the patient was remarkably good, considering the character of the wound. His pulse was strong enough to send out the blood in jets from the arteries when the compression was removed. The skin was quite natural and warm, he was quiet and self composed, but, of course, somewhat depressed.

Upon consultation with the medical staff of Cheatham's Division present at the hospital, it was decided to amputate at the hip, as such a procedure afforded the only chance of life to the patient. He was placed on the table, stimulants and chloroform given, and the limb removed in the following manner: A large amputating knife was passed in just above and close to the trochanter, carried over the neck of the femur, and brought out at the inner surface of the thigh some two inches below the pubes, and a long anterior flap thus formed. While an assistant compressed the artery at the brim of the pelvis with both thumbs, another followed the track of the knife with his fingers grasping the flap as soon as formed. The hemorrhage was well controlled. With a scalpel the remaining soft parts were divided, and the limb removed. The vessels were at once tied, the flap drawn up, while the operator proceeded to remove the head of the femur. The bone was seized with a stout pair of tooth-forceps, and the ligaments divided with the scalpel. An inch or two of tissue was then trimmed off the upper margin of the wound so as to smooth off and fashion a posterior short flap. Some ten or twelve ligatures were required; the flaps brought together half an hour after the operation, and with some difficulty pretty fair apposition was effected. The loss of blood during the operation was not great, but he was more depressed than previous to it. Cold water dressings were applied to the wound and stimulants given at proper intervals. He remained sensible for six or eight hours after being removed from the table, though constantly growing weaker. He

died sixteen hours after being wounded and thirteen hours after the operation.

Cases Nos. 7, 8, and 9.—Dr. J. T. Gilmore, now a practitioner of Mobile, Alabama, writes to me March 28, that he operated by amputation three times at the coxo-femoral articulation.

CASE 1. A private in 13th Miss. Regiment, wounded on picket a few days after the battle of Seven Pines. The femur was so badly shattered that amputation was resorted to. He remained in the country several weeks after the operation, and was then removed to Richmond. I heard from his friends that he recovered entirely, and went home. I lost my record of cases at the battle of Cedar Creek, October 19, 1864, and am, therefore, unable to give the name of this patient, but I think it was Williamson. He was a young man, about 20 years of age, of fine constitution, and was operated on within three hours after receipt of the injury. In order to give him every possible chance for recovery, I kept him under my own care, and sent to Richmond from time to time for such supplies as were necessary to sustain him under the great shock and excessive suppuration that usually follow this operation. I am convinced that he would have died, had he been treated as the wounded usually are after a battle. I, therefore, regard this case, though successful, as not a fair criterion by which to judge of amputation at the hip-joint, especially a primary operation, in military surgery.

The other two cases were members of General Barksdale's Miss. Brigade, wounded at the battle of Malvern Hill. One of them survived the operation only a few hours, the other about 48 hours. I had a full record of the above cases, and intended to publish them on the first opportunity, but the defeat of our army under General Early, in the valley, enabled the enemy to capture all my papers. I had notes of about 50 cases of resection of the shoulder-joint, and about 40 of the elbow, with three cases of resection of the hip-joint, all of which I lost on the above occasion.

Two of the cases of resection of the hip died. The other, a case operated on by surgeon Cullen, of General Longstreet's Staff, at Knoxville, Tenn., when our forces invested that place, was living at the time our army withdrew, some six days after the operation. His condition was not promising the last time I saw him. He was a private in a Michigan Cavalry Regiment, wounded and captured a few days after our arrival in front of Knoxville. I was in the field nearly the entire war, and my experience teaches me

that amputation of the hip-joint is not a good operation in gunshot wounds.

I recollect some six cases, that would have required amputation at this joint, which recovered without an unpleasant symptom. One case wounded at the battle of Fredericksburg, a Mississippian; two cases wounded at Chancellorsville, Georgians, and the remaining cases wounded at Gettysburg, two of them of Kershaw's South Carolina Brigade, and the other of a Georgia Brigade.

I believe that one third of the cases of gunshot wounds of the femur, usually supposed to require amputation at the hip-joint, will recover if left entirely to the efforts of nature; and I am confident that a much larger percentage will die if subjected to either amputation or resection.

Dr. Grant's Cases of Amputation and Resection.—No. 10, Amputation, and No. 5, Resection. The letter is dated Pulaski, Tenn., March 30, 1867.

The only case of amputation of the hip-joint, that I have any personal knowledge of was performed by myself in 1862, upon a private soldier of Major Douglas's Battery Cavalry, whose name I do not recollect. The wound was inflicted by a double-barrelled shotgun, charged with buck and ball cartridge. The muzzle was within a few inches of the patient, the charge passed directly through the thigh, just below the trochanters, fracturing and comminuting the bone, with extensive laceration of soft parts.

The operation was performed about eight hours after receipt of the wound, and chloroform was given to complete anesthesia. Lisfranc's method was selected; by transfixing the parts with a twelve inch knife, entering an inch below the anterior superior spinous process of the ilium, passing it out near the tuberosity of the ischium, a flap about five inches long was made; then another one internal, and the head of the bone disarticulated.

I saw the man three days after the operation, when he had thoroughly reacted, and seemed to be doing well. He fell into the hands of the Federals the same day. I never saw him afterwards, but received a message from him on the eleventh day after the operation, stating that he was doing well; this was my last intelligence from him, I do not, therefore, know whether he lived or died.

The patient was left at a private house on the Murfreesboro' turnpike, between Lavergne and Nashville; the name of the family

does not occur to me, but I think it was the house of a widow lady. You may have an opportunity of learning something of it yourself. It was in the fall of 1862.

I know of but one case of resection at the hip-joint; that I performed at the battle of Kennesaw Mountain. I will give you the case as recorded upon my note book.

T. J. Hobson, private Co. H. 32d Tenn. Regiment; compound comminuted fracture of the femur near the trochanter major, extending into the joint. Operation; linear incision ten inches long over the prominence of this trochanter; muscles dissected down to bone, the head removed, lower fragment turned, and the end sawed off below the fractured part with a straight saw; very slight hemorrhage; chloroform was administered to total anaesthesia. Operation performed twelve hours after receipt of wound. Amputation was not at all practicable, except at the hip-joint. I chose resection as giving in my judgment the best chance for recovery. His age was 23 years; health good. Never fully reacted from shock of injury and operation, but died on 27th day of June, 1864, three days after it.

Account of Drs. Felton's and Lay's Cases, Nos. 11 and 12, in a letter from Dr. Charles H. Mastin, of Mobile, Alabama.

My friend Dr. S. L. Nidelet, of this city, who was surgeon of General D. H. Maury's Division, at the battle of Corinth, under Generals Van Dorn and Price, in 1863, gave me the statement of two cases of hip-joint amputation, as follows:—

CASE 1. A man sent to Iuka, after that battle, had his hip-joint disarticulated by surgeon Felton of Colonel Dockery's Regiment, Arkansas Volunteers, think it was the 19th, wound of right thigh from conical ball, April, 1863.

Result of case: patient died on the table. The operation was performed at least a month after reception of the wound. Surgeon Felton himself died of a congestive fever, at Jackson, Miss., in June, 1863.

CASE 2. A soldier who was wounded at Vicksburg, June, 1863. Operated on immediately at Marine hospital, by surgeon B. D. Lay, then in charge of that hospital. Result: death in an hour, before being removed from table. Dr. Nidelet is a gentleman upon whose statements I can fully rely.

Dr. Compton's Cases, Nos. 13, 14, and 15.

I comply with your request with reluctance, because my necessary want of accuracy in the detail of the cases of hip-joint amputation, performed by me during the war, will add very little, if anything, to the value of the proposed statistics. As I stated in my letter to you, all my notes and memoranda were lost. But since you insist upon it, I will give you such of the particulars as occur to my recollection now, and from this you can select such items as will suit your purpose.

CASE 1. Lieut. —, æt. about 28 or 30 years, of an Arkansas Regiment, Cabell's Brigade, was wounded by a supposed solid shot at the battle of Corinth, Oct. 3, 1862. The ball struck the right hip, making a terrible wound about the buttock, tearing up the attachments of the gluteal muscles, and struck the femur about the trochanter major. The bone was shivered for four or six inches of its body. The head was split, and lay exposed in the acetabulum.

The operation consisted in paring the edges of the wound; then with a long knife, I commenced the incision just in front of the upper end of the lower fragment of bone, bringing it down to, perhaps, a little lower than the middle of the thigh, and thus made a flap of the anterior portion of the thigh, which I adjusted with tolerable accuracy to the wound above after removing the head from the cavity and securing the arteries. The patient had a difficult recovery from the shock. For seven or eight days, he seemed to do well, and the inflammation did not run high. His appetite was becoming good, and I began to have strong hopes of his recovery. At about the end of this period, erysipelas seized the wound and extended rapidly in spite of tincture of iron and such other treatment as I thought proper to institute, and the poor fellow died in less than thirty-six hours.

CASE 2. Private Roberts or Robinson, æt. about 35, of a Louisiana Regiment, wounded in March, 1863, at Fort Pemberton, on the Yazoo River, by a fragment of shell from a gun-boat. I was standing within a few feet of him, and seeing him fall, I ran to his assistance. Ripping open his pants, I found that one-half of a twenty-four pounder, after entering on the left or outside, had imbedded itself in the centre of the upper portion of the left thigh, driving out a section of the bone just below and wounding the femoral artery. An assistant controlled the hemorrhage, while I made an irregular circular incision around the limb at the upper margin of the wound, dissected out the head of the bone, trimmed away a considerable

quantity of lacerated tissue, tied the arteries, and, finally, adjusted the parts quite accurately. This was all done and the patient in bed in less than an hour after receipt of the wound. Strange to say, the shock appeared not to have affected him much. The decline of the pulse was insignificant. After recovering from the anæsthetic, he was cheerful, and even jocular. Subsequently his symptomatic fever was slight, and his appetite never failed him. I treated him for three or four days, and then sent him to the hospital at Yazoo City. A year after I met Surgeon Green (who was in charge of it) at Marion, Alabama; he told me that my patient had recovered and gone home, in a short time after his admission, in fine health. Since which I have not heard from him.

CASE 3. Private Cooper, æt. about 30, Alabama Regiment, wounded at siege of Vicksburg by a shell, producing fearful laceration of the right hip. The upper third of the femur was comminuted, tuberosity of the ischium fractured, with the wound extending into the rectum. I only operated because the poor fellow begged me to do so. The hemorrhage had been great. I operated mainly as in Case 2, making a flap of the anterior aspect of the thigh; dressed the wound, stimulated as actively as I could, but he never recovered from the shock; and thus ended my third, and, I trust, my last case of amputation at the hip-joint.

CASE 4, of *Resections*.—Dr. Chas. Jas. O'Hagan, of Glenville, N. C., writes:—

I assisted Dr. Ladd in the operation, and know more, perhaps, of the after-treatment of the case than he does. But I am unable to give the name or company of the patient because he did not belong to my command, and I kept no notes of the case.

Private ———, 56th North Carolina Regiment, Ransom's Brigade, was wounded on the night of the 17th of June, 1864, in front of Petersburg, by a rifle ball, conical, I presume, in the right thigh. It entered on the inner aspect of the limb and passed obliquely upwards and outwards, producing a comminuted fracture of the neck of the femur and driving the fragments of bone into the surrounding tissues. The shaft of the bone was not shattered, and as the man was very much worn and exhausted, as most of our troops were at that time, it was considered advisable to perform resection of the head and neck of the femur, as offering a better chance of recovery than amputation.

The operation was performed on the 18th, twelve hours after the

reception of the wound, and the bone removed at the trochanter major. He bore the operation well, and, although weak, was hopeful. He was sent to the Fair Ground Hospital, from which he was removed in a few days, placed in a tent, and attended by Dr. Ladd and myself.

He survived the operation two months, and succumbed at last to suppuration, caused, as I verily believe, by the want of proper food and stimulants, and the general prevalence of pyemic poison, which attacked nearly all our cases which were in the neighborhood of that hospital.

Statement of Dr. Potts' Case, No. 16 (in a letter from Dr. Saunders, of Memphis, Tenn.):—

The case operated upon by Dr. Potts was on a young man named Jackson, æt. about 21 years, and in fine health. The injury was a gunshot wound, the ball entering, as well as I remember, about the trochanter major, fracturing the bone badly. I am not positive whether the fracture extended into the capsular ligament. The amputation was by antero-posterior flaps. The patient lived some eight or ten hours afterwards. This was an intermediate operation.

I now know positively that these twenty cases are not all that were operated upon during the war in the Southern States.

Dr. Josiah C. Nott, now moved to Baltimore, Md., wrote me, in March last, that he knew personally of no case worth reporting, but says he performed the operation of amputation at the hip-joint while attached to General Bragg's Army. In every instance he had to abandon the cases in consequence of constant movements of the troops in the field, and had neither time nor opportunity to take notes.

The late Dr. Hargrove Hinkley, who recently died in Demopolis, Alabama, is reported to have operated twice in the battles before Jackson, Mississippi, in 1863; one said to have been successful. I have failed as yet to obtain the particulars of these cases.

I also learn that Dr. Cowan, late Surgeon on General Forrest's staff, operated three or four times by amputation and resection. I have received no reply to my applications to him.

I learn through Dr. Mastin, that Dr. Crymes, of Eufaula, Alabama, had another amputation at the hip-joint besides the one registered in my tabular statement.

I think it probable, however, that the above statistics embrace a

pretty accurate account of these operations performed in the service on the Southern side; probably, at least, of all the successful cases, since they naturally would be first reported.

In the analysis of this collection I do not think a question can arise as to the success of four in the twenty cases, and one is marked doubtful. Dr. East's is published a success in one of our journals, and a member of this Association now present, Dr. Heard, of Galveston, told me this very week that he was consulted himself in the case, and knows it to be authentic. He, moreover, states that the operator was at the time, or had been, in the Southern army. Dr. Gilmore's was furloughed home; Dr. Compton's was well a year afterwards; and Dr. Fauntleroy's has been published to the world in a medical journal.

This gives a success of four in twenty cases of amputations, or one in five. Three of these recovered after primary amputation, and one after secondary.

Of the thirteen cases of resections, five may be considered successful, or one in two and a half. Two after primary, two after secondary, and one intermediate (six hours) recovered.

A comparison now of these two operations at the hip-joint gives this result. Resection doubly as favorable as amputation.

In *Circular No. 6*, Oct. 1865, War Department, Surgeon-General's Office, Washington City, is given a table of twenty-one hip-joint amputations with three successful results. One of these is proved to have been erroneous, which reduces the cases of recovery to one in ten, being precisely *double* the mortality that my statistics make it to have been in the Southern service; and of thirty-two cases of resection or excision of the head of the femur only four recovered, being a recovery of only one in eight, a fatality nearly *four times* greater than on the Southern side.

Thus has the investigation of this interesting subject during the past two months, by the request issued from the office of the Surgeon-General, led the searcher unwittingly to a most favorable result on the side least expected when we consider the destitute and isolated condition of the South during the war.

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